
**BEFORE THE BOARD OF OIL, GAS, AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH**

LIVING RIVERS, a non-profit association,

Petitioner,

v.

DIVISION OF OIL, GAS AND MINING,

Respondent,

U S Oil Sands Inc. f/k/a EARTH ENERGY
RESOURCES, INC.,

Intervenor/Respondent.

MEMORANDUM DECISION

Docket No. 2010-027

Cause No. M/047/0090 A

This cause initially came on for hearing before the Board of Oil, Gas and Mining (the "Board") on February 23, 2011, at 9:00 a.m., in the Hearing Room of the Utah Department of Natural Resources at 1594 West North Temple Street, in Salt Lake City, Utah. The following Board members were present and participated in the February, 2011 hearing: Chairman James T. Jensen, Ruland J. Gill, Jr., Vice Chairman, Jake Y. Harouny, Jean Semborski, and Kelly L. Payne.

Rob Dubuc and Joro Walker appeared as counsel for Petitioner Living Rivers, A. John Davis, Christopher R. Hogle, and Benjamin M. Machlis appeared on behalf of Respondent US Oil Sands, Inc. f/k/a Earth Energy Resources, Inc. ("US Oil Sands"). Steven F. Alder, Assistant

Attorney General, appeared as counsel for Respondent Utah Division of Oil, Gas and Mining (the "Division"). Michael S. Johnson, Assistant Attorney General, represented the Board.

At the February 23, 2011 hearing, witness Charles Norris testified on behalf of Living Rivers and witness Paul Baker testified on behalf of the Division.

Following the Board's February, 2011 hearing, based upon a stipulation filed by the parties, the Board issued a May 12, 2011 Order "to continue the hearing in this matter until after the Utah Department of Environmental Quality has resolved Living Rivers' March 16, 2011 Request for Agency Action," referring to an administrative challenge to a "permit-by-rule" decision by the Executive Secretary of the Utah Water Quality Board and the Utah Division of Water Quality (collectively "DWQ") pertaining to the same mining operation at issue in this matter. The matter before DWQ was initially addressed by an evidentiary hearing before Administrative Law Judge Sandra K. Allen, who issued a Recommended Order. The Recommended Order was approved by the Utah Board of Water Quality during an October 24, 2012 meeting and through a November 1, 2012 Order.

Following resolution of the DWQ proceedings, this matter was again ready to proceed before the Board. In anticipation of the Board resuming its hearing, the parties executed and filed a Stipulation Regarding Issues and Procedures for the December 5, 2012 Board Hearing (the "Stipulation"). Pursuant to the Stipulation, the only remaining claims being asserted by Living Rivers and requiring Board resolution are whether:

- a. the approved PR Spring Mine Notice of Intention to Commence Large Mining Operations ("NOI") provides a general narrative description (i) identifying potential impacts to

ground water systems, as required by Utah Admin. Code R647-4-109(1); and (ii) of depth to ground water, as required by Utah Admin. Code R647-4-106(8); and

b. whether the NOI's reclamation plan violates Utah Admin. Code R647-4-110 because, as Living Rivers alleges, there will only be visual inspections of the site, preventing the Division from ascertaining whether the remaining process chemical contained in the processed tar sands will contaminate the ground water.

At the hearing and pursuant to the Stipulation, US Oil Sands made an oral motion to dismiss with prejudice all other claims asserted by Petitioner in its Request for Agency Action in this matter. The Board granted that motion at the hearing and all claims save those set forth in paragraphs a. and b., above, are dismissed with prejudice.

The parties agreed via the Stipulation that the Board can consider and weigh the evidence presented during the DWQ hearing. Consistent with that agreement, the parties submitted to the Board the DWQ evidentiary record and stipulated to its admission as an exhibit in this case. The parties further agreed that Living Rivers and US Oil Sands would not call any witnesses, but instead would rely upon the testimony and evidence set forth in the DWQ evidentiary record. The parties agreed that the Division, however, would be permitted to present new testimony from Division staff during the Board's resumed hearing.

This matter came back on for hearing before the Board on December 5, 2012 at the same location set forth above. The following Board members were present and participated in the December, 2012 hearing: Chairman James T. Jensen, Ruland J. Gill, Jr., Vice Chairman, Jake Y. Harouny, Jean Semborski, Kelly L. Payne, and Carl F. Kendell. Michael S. Johnson, and

Cameron B. Johnson, Assistant Attorneys General, represented the Board. Rob Dubuc and Joro Walker appeared as counsel for Living Rivers. A. John Davis, Christopher R. Hogle, and Benjamin M. Machlis appeared as counsel for US Oil Sands. Steven F. Alder, and Kass Wallin, Assistant Attorneys General, appeared as counsel for the Division. Witness Paul Baker testified on behalf of the Division.

NOW THEREFORE, the Board, having fully considered the testimony adduced and the exhibits received at the hearing, being fully advised, and good cause appearing, makes and enters this Memorandum Decision setting forth its ruling in this matter and directing the prevailing party to prepare and submit a proposed Findings of Fact, Conclusions of Law, and Order.

Issue No. 1. Does the approved PR Spring Mine Notice of Intention to Commence Large Mining Operations ("NOI") provide a general narrative description: (i) identifying potential impacts to ground water systems, as required by Utah Admin. Code R647-4-109(1); and (ii) of depth to ground water, as required by Utah Admin. Code R647-4-106(8).

Utah Admin. Code R647-4-106.8 requires that the operator provide "a narrative description referencing maps or drawings as necessary, of the proposed operations including . . . [d]epth to groundwater." Utah Admin. Code R647-4-109.1 requires that the operator provide "a general narrative description identifying potential surface and/or subsurface impacts" including "[p]rojected impacts to surface and groundwater systems."

Section 106.8 of the NOI contains a narrative description that characterizes the depth to groundwater in the subject area. This discussion contains references to maps and other attachments contained within the Figures and Appendices of the NOI. Section 109.1 of the NOI

contains additional groundwater discussions, including a discussion of subsurface impacts and projected impacts to groundwater systems. Living Rivers contends that these descriptions, and the evidence the Division relied upon in judging the adequacy of these descriptions, are insufficient to meet the requirements of the above-referenced regulations.

The NOI's narrative descriptions rely upon and make reference to the following sources of information, among others, concerning groundwater: (1) published studies concerning depth to regional groundwater in the area (the studies indicate this depth to be 1500 feet or more); (2) drilling results from 25 geologic test wells (down to maximum depths of 150 feet) which did not encounter any groundwater; (3) BLM materials concerning springs in the area; and (4) drill logs from a nearby abandoned exploratory gas well. The Division's staff reviewed this evidence, exercised its professional judgment in assessing the adequacy of the NOI's groundwater discussions, and concluded that all regulatory requirements had been met.

Additional groundwater-related evidence beyond that discussed in the NOI was presented during the DWQ proceedings and is contained within the DWQ record admitted into evidence in this matter. This evidence includes: (1) data from 180 test holes drilled in 2011 in the vicinity of the project (55 of which were located within the project area), none of which encountered groundwater; (2) data from five exploratory water wells, only one of which encountered any water (this water was found at a depth of more than 1800 feet and was not present in useful quantities); (3) testimony and exhibits demonstrating that the few features found in the area marked as seeps on the operator's maps are localized, short-lived concentrations of water present due to runoff after precipitation and snowmelt events rather than seeps fed by any significant

source of groundwater; and (4) testimony concerning visits by DWQ's staff to collect groundwater from seeps during which they failed to find water in sufficient quantities to sample.

Administrative Law Judge Sandra K. Allen found that the evidence in the DWQ record supported the determination that the project would have a *de minimis* effect on groundwater due to the general absence of groundwater in the area to a depth of more than 1,500 feet. Memorandum and Findings of Fact, Conclusions of Law and Recommended Order ("ALJ Decision") at 12-19, 31-37. Given ALJ Allen's findings, US Oil Sands urged the Board at its December 5, 2012 hearing to apply the doctrine of collateral estoppel to the shallow groundwater issues presented. The Board did not apply collateral estoppel, however, and instead weighed the evidence in the DWQ record for itself (along with the additional evidence received into evidence by the Board as part of its 2011 and 2012 hearings) and makes its own findings and determinations on this issue.

At the Board's December 5, 2012 hearing, Paul Baker testified that he had reviewed the evidence from the DWQ record (some of which had also been submitted directly to the Division) and that this evidence confirmed the Division's prior analysis and conclusion that the regulatory requirements at issue had been met. The Board agrees that the additional evidence contained in the DWQ record confirms and provides further support for the Division's actions in determining the adequacy of the NOI's descriptions as required by Utah Admin. Code R647-4-106.8 and 109.1.

At the December 5, 2012 hearing, Living Rivers argued that the question of compliance with the groundwater description requirements of Utah Admin. Code R647-4-106.8 and 109.1

depends upon what definition of "groundwater" is applied. The DWQ proceedings focused upon the definition of groundwater set forth in the DWQ rules at Utah Admin. Code R317-6-1.19, which defines "groundwater" to mean "subsurface water in the zone of saturation including perched ground water." Because those rules do not define the term "zone of saturation," DWQ relied upon the U.S. Geological Survey definition which defines that term as "[t]he zone in which the functional permeable rocks are saturated with water under hydrostatic pressure. Water in the zone of saturation will flow into a well, and is called ground water." ALJ Decision at 31, ¶16.

The R647 rules governing the NOI do not set forth a definition of "groundwater." In the absence of such a definition, the Division's hydrologists applied their professional expertise to the information before them in determining the sufficiency of the NOI's groundwater discussions, and the Board finds no fault in their work or conclusions. On this basis alone, the Board upholds the Division's actions as to Issue No. 1.

Living Rivers urges the Board to identify an appropriate "groundwater" definition in this case and recommends that a definition from other sets of regulations administered by the Division be used (such as the coal regulations and oil and gas regulations). These definitions do not control in this matter, however. As noted above, in the absence of a "groundwater" definition in the R647 Rules, the Division appropriately applied its hydrologic expertise in assessing the adequacy of the descriptions set forth in the NOI. Even if the Board were to accept Living Rivers' invitation to use the "groundwater" definitions from the oil and gas rules or coal rules, however, the Board finds that the NOI's descriptions would still meet the

requirements of Utah Admin. Code R647-4-106.8 and 109.1. The Board notes that the oil and gas program definition of "groundwater," like the DWQ definition, employs the term "zone of saturation" without further defining that phrase, while the coal program definition employs the similar term "saturated." See Utah Admin. Code R649-1-1 (oil and gas rules); Utah Admin. Code R645-100-200 (coal rules). The Board concludes that the U.S. Geological Survey definition of "zone of saturation" relied upon by DWQ in construing its "groundwater" definition would be an appropriate definition to rely upon even if the "groundwater" definitions from the oil and gas or coal programs were used as suggested by Living Rivers.

Ultimately, the Board can find no fault in the Division's determination of the adequacy of the NOI's compliance with Utah Admin. Code §§ R647-4-106.8 and 109.1. Based on the evidence presented, the Board concludes that the requirements of these regulations were met.

Issue No. 2. Does the NOI's reclamation plan violate Utah Admin. Code R647-4-110 because, as Living Rivers alleges, there will only be visual inspections of the site, preventing the Division from ascertaining whether the remaining process chemical contained in the processed tar sands will contaminate the ground water.

Utah Admin. Code R647-4-110.4 provides that each NOI shall include a reclamation plan "consisting of a narrative description of the proposed reclamation including, but not limited to . . . [a] description of the treatment, location and disposition of any deleterious or acid-forming materials generated and left on-site, including a map showing the location of such materials upon the completion of reclamation."

The NOI, and in particular Section 110.4, sets forth a narrative description of proposed reclamation including a description of the treatment, location and disposition of any deleterious materials left on site.

The parties disagreed about whether the process chemical d-limonene is a deleterious material. The Board finds on the basis of the evidence presented, including evidence within the NOI appendices and the DWQ record, that d-limonene is not a deleterious material within the meaning of Utah Admin. Code 647-4-110.4. The evidence also indicated that 99% of this material will be recycled, that only trace amounts will remain, and that these trace amounts will evaporate.

In any event, Living Rivers' specific claim is that Utah Admin. Code 647-4-110 was violated "because . . . there will be only visual inspections of the site, preventing the Division from ascertaining whether the remaining process chemical contained in the processed tar sands will contaminate the groundwater." The Division and US Oil Sands note, however, and the Board agrees, that this regulation does not set forth specific requirements for subsurface monitoring or address the sufficiency of visual monitoring versus any other form of monitoring. On this basis alone, the Board upholds the Division's actions with respect to Issue No. 2. Furthermore, Division witness Paul Baker noted that the Division monitors reclamation to ensure that it complies with the reclamation plan, and that nothing limits this monitoring activity to visual inspections. The Division is able to utilize other monitoring methods when in the exercise of its professional judgment it deems it necessary, and the Board is comfortable that the Division will do so in this case.

The Board, on the basis of the evidence presented, concludes that the requirements of Utah Admin. Code R647-4-110 have been met.

The issues raised by the parties as stated in the Stipulation are resolved. The Board concludes that the NOI satisfies the regulatory requirements under Utah Admin. Code R647-4-106 and 109. Further, the Board finds that the Respondent's reclamation plan complies with Utah Admin. Code 647-4-110. Pursuant to R641-109-100, the Board asks counsel for US Oil Sands to prepare a proposed Findings of Fact, Conclusions of Law and an Order memorializing the decisions announced above. Objections to the proposed order may be submitted and will be considered prior to final Board action as provided in the regulations.

The rulings announced herein are interim and not final, and the time for seeking administrative reconsideration pursuant to Utah Code Ann. §63G-4-302 or judicial review pursuant to Utah Code Ann. §63G-4-401 will not begin to run until the Board issues its final Findings of Fact, Conclusions of Law and Order.

The Chairman's signature on a facsimile copy of this Interim Order shall be deemed the equivalent of a signed original for all purposes.

DATED this 10th day of January, 2013.

STATE OF UTAH
BOARD OF OIL, GAS, AND MINING

By: 
James T. Jensen, Chairman

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on this 11th day of January, 2013, a true and correct copy of the foregoing MEMORANDUM DECISION was served United States mail, and also via e-mail, as follows:

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